

WHAT IS CLAIMED IS:

1. A radio communication system capable of making connection in code division multiple access (CDMA) radio communication between a base station and a mobile station, for controlling a transmission power level in one of said base station and said mobile station in accordance with a reception power level in the other station, said radio communication system comprising:
- detector configured to detect a fluctuation rate of a transmission path; and
- controller configured to average a reception power level in a transmission signal of said one station received by said other station with a predetermined cycle and for controlling the transmission power level in said one station in accordance with said averaged reception power level, when the fluctuation rate detected by said detector is equal to or higher than a first threshold value and lower than a second threshold value, and to average the reception power level of the transmission signal of said one station received by said other station with a cycle longer than said predetermined cycle and for controlling the transmission power level in said one station in accordance with said averaged reception power level, when the fluctuation rate detected by said detector is lower than the first threshold value or equal to or higher than the second threshold value.

2. A radio communication system capable of making connection in code division multiple access (CDMA) radio communication between a base station and a mobile station, for controlling a transmission power level in said mobile station in accordance with a reception power level in said base station, said radio communication system comprising:

detector configured to detect a fluctuation rate of a transmission path; and

controller configured to average a reception power level in a transmission signal of said mobile station received by said base station with a predetermined cycle and for controlling the transmission power level in said mobile station in accordance with said averaged reception power level, when the fluctuation rate detected by said detector is equal to or higher than a first threshold value and lower than a second threshold value, and for averaging the reception power level of the transmission signal in said mobile station received by said base station with a cycle longer than said predetermined cycle and for controlling the transmission power level of said mobile station in accordance with said averaged reception power level, when the fluctuation rate detected by said detector is lower than the first threshold value or equal to or higher than the second threshold value.

3. A radio communication system capable of making

connection in code division multiple access (CDMA)
radio communication between a base station and a mobile
station, for controlling a transmission power level of
said base station in accordance with a reception power
5 level in said mobile station, said radio communication
system comprising:

detector configured to detect a fluctuation rate
of a transmission path; and

10 controller configured to average a reception power
level of a transmission signal in said base station
received by said mobile station with a predetermined
cycle and for controlling the transmission power level
of said base station in accordance with said averaged
reception power level, when the fluctuation rate
15 detected by said detector is equal to or higher than
a first threshold value and lower than a second
threshold value, and for averaging the reception power
level of the transmission signal in said base station
received by said mobile station with a cycle longer
20 than said predetermined cycle and for controlling
the transmission power level of said base station in
accordance with said averaged reception power level,
when the fluctuation rate detected by said detector is
lower than the first threshold value or equal to or
25 higher than the second threshold value.

4. A transmission power controlling method for
use in a radio communication system allowing a base

station to make code division multiple access (CDMA)
radio communication with a mobile station, for
controlling a transmission power level in one of said
base station and said mobile station in accordance with
5 a reception power level in the other of said base
station and said mobile station, said transmission
power controlling method comprising the steps of:

detecting a fluctuation rate of a transmission
path; and

10 averaging a reception power level of a transmis-
sion signal in said one station received by said other
station with a predetermined cycle and controlling
the transmission power level of said one station in
accordance with said averaged reception power level,
15 when the fluctuation rate detected at said detecting
step is equal to or higher than a first threshold value
and lower than a second threshold value, and averaging
the reception power level of the transmission signal
in said one station received by said other station
20 with a cycle longer than said predetermined cycle and
controlling the transmission power level of said one
station in accordance with said averaged reception
power level, when the fluctuation rate detected at said
detecting step is lower than the first threshold value
25 or equal to or higher than the second threshold value.

5. A transmission power controlling method for
use in a radio communication system allowing a base

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station to make code division multiple access (CDMA)
radio communication with a mobile station, for
controlling a transmission power level in said mobile
station in accordance with a reception power level in
5 said base station, said transmission power controlling
method comprising the steps of:

detecting a fluctuation rate of a transmission
path; and

10 averaging a reception power level of a transmis-
sion signal in said mobile station received by said
base station with a predetermined cycle and controlling
the transmission power level in said mobile station in
accordance with said averaged reception power level,
when the fluctuation rate detected at said detecting
15 step is equal to or higher than a first threshold value
and lower than a second threshold value, and averaging
the reception power level of the transmission signal
in said mobile station received by said base station
with a cycle longer than said predetermined cycle and
20 controlling the transmission power level of said mobile
station in accordance with said averaged reception
power level, when the fluctuation rate detected at said
detecting step is lower than the first threshold value
or equal to or higher than the second threshold value.

25 6. A transmission power controlling method, for
use in a radio communication system allowing a base
station to make code division multiple access (CDMA)

radio communication with a mobile station, for
controlling a transmission power level of said base
station in accordance with a reception power level
of said mobile station, said transmission power
controlling method comprising the steps of:

detecting a fluctuation rate of a transmission
path; and

averaging a reception power level of a
transmission signal in said base station received by
said mobile station with a predetermined cycle and
controlling the transmission power level in said base
station in accordance with said averaged reception
power level, when the fluctuation rate detected at said
detecting step is equal to or higher than a first
threshold value and lower than a second threshold
value, and averaging the reception power level of the
transmission signal in said base station received by
said mobile station with a cycle longer than said
predetermined cycle and controlling the transmission
power level in said base station in accordance
with said averaged reception power level, when the
fluctuation rate detected at said detecting step is
lower than the first threshold value or equal to or
higher than the second threshold value.

7. A radio communication apparatus for making
code division multiple access (CDMA) radio communica-
tion with a radio communication station, measuring a

reception power level of a transmission signal from
said radio communication station and allowing said
radio communication station to control a transmission
power level in said radio communication station in
5 accordance with said measured reception power level,
said radio communication apparatus comprising:

first detector configured to detect a fluctuation
rate of a transmission path with said radio
communication station;

10 second detector configured to average the
reception power level of the transmission signal in
said radio communication station with a predetermined
cycle, when the fluctuation rate detected by said first
detector is equal to or higher than a first threshold
15 value and lower than a second threshold value, and for
averaging the reception power level of the transmission
signal of said radio communication station with a
cycle longer than said predetermined cycle, when the
fluctuation rate detected by said first detector is
20 lower than the first threshold value or equal to or
higher than the second threshold value; and

transmitter configured to transmit information
based on the reception power level obtained by said
second detector to said radio communication station.

25 8. A mobile communication terminal for making
code division multiple access (CDMA) radio communica-
tion with a base station, measuring a reception power

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level of a transmission signal from said base station and allowing said base station to control a transmission power level in said radio communication station in accordance with said measured reception power level, said mobile communication terminal comprising:

first detector configured to detect a fluctuation rate of a transmission path with said base station;

second detector configured to average the reception power level of the transmission signal in said base station with a predetermined cycle, when the fluctuation rate detected by said first detector is equal to or higher than a first threshold value and lower than a second threshold value, and for averaging the reception power level of the transmission signal in said base station with a cycle longer than said predetermined cycle, when the fluctuation rate detected by said first detector is lower than the first threshold value or equal to or higher than the second threshold value; and

transmitter configured to transmit information based on the reception power level obtained by said second detector to said base station.

9. A base station apparatus for making code division multiple access (CDMA) radio communication with a mobile station, measuring a reception power level of a transmission signal from said mobile station and allowing said mobile station to control a

transmission power level in said radio communication station in accordance with said measured reception power level, said base station apparatus comprising:

5 first detector configured to detect a fluctuation rate of a transmission path with said mobile station;
second detector configured to average the reception power level of the transmission signal in said mobile station with a predetermined cycle, when the fluctuation rate detected by said first detector is
10 equal to or higher than a first threshold value and lower than a second threshold value, and for averaging the reception power level of the transmission signal in said mobile station with a cycle longer than said predetermined cycle, when the fluctuation rate detected
15 by said first detector is lower than the first threshold value or equal to or higher than the second threshold value; and

transmitter configured to transmit information based on the reception power level obtained by said
20 second detector to said mobile station.

10. A transmission power controlling method for use in a radio communication station making code division multiple access (CDMA) radio communication, for measuring a power level in a reception signal by
25 said radio communication station and controlling a transmission power level in a transmitting station transmitting said received signal in accordance with

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said measured reception power level, said transmission power controlling method comprising:

first detection step of detecting a fluctuation rate of a transmission path with said radio communication station;

second detection step of averaging the reception power level of the transmission signal in said radio communication station with a predetermined cycle, when the fluctuation rate detected at said first detection step is equal to or higher than a first threshold value and lower than a second threshold value, and averaging the reception power level of the transmission signal in said radio communication station with a cycle longer than said predetermined cycle, when the fluctuation rate detected at said first detection step is lower than the first threshold value or equal to or higher than the second threshold value; and

transmission step of transmitting information based on the reception power level obtained at said second detection step to said radio communication station.

11. A transmission power controlling method for use in a mobile station which is connected to a base station by code division multiple access (CDMA) radio communication, for measuring a power level of a signal received from said base station and controlling a transmission power level of said base station in

accordance with said measured reception power level,
said transmission power controlling method comprising:

first detection step of detecting a fluctuation
rate of a transmission path with said base station;

5 second detection step of averaging the reception
power level of the transmission signal in said base
station with a predetermined cycle, when the fluctua-
tion rate detected at said first detection step is
equal to or higher than a first threshold value and
10 lower than a second threshold value, and averaging
the reception power level of the transmission signal
in said base station with a cycle longer than said
predetermined cycle, when the fluctuation rate detected
at said first detection step is lower than the first
15 threshold value or equal to or higher than the second
threshold value; and

transmission step of transmitting information
based on the reception power level obtained at said
second detection step to said base station.

20 12. A transmission power controlling method for
use in a base station connected to a mobile station by
code division multiple access (CDMA) radio communica-
tion, for measuring a power level of a signal received
from said mobile station and controlling a transmission
25 power level of said mobile station in accordance with
said measured reception power level, said transmission
power controlling method comprising:

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first detection step of detecting a fluctuation rate of a transmission path with said mobile station;

second detection step of averaging the reception power level of the transmission signal in said mobile station with a predetermined cycle, when the fluctuation rate detected at said first detection step is equal to or higher than a first threshold value and lower than a second threshold value, and averaging the reception power level of the transmission signal in said mobile station with a cycle longer than said predetermined cycle, when the fluctuation rate detected at said first detection step is lower than the first threshold value or equal to or higher than the second threshold value; and

transmission step of transmitting information based on the reception power level obtained at said second detection step to said mobile station.

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